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| 10/611,493 | 07/01/2003 | Jerry Denham | 038190/264941 | 3338 |

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ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

MAYES, MELVIN C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1734

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,493

Applicant(s)

DENHAM ET AL.

Examiner

Melvin Curtis Mayes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20, 25-30 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/1/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

(1)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(2)

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites the limitation "the ceramic fiber. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 claims the ceramic fiber is selected from the group. Which layer of Claim 11 is made of this ceramic fiber, the outer, batting or inner layer?

Claim Rejections - 35 USC § 103

(3)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

(4)

Claims 11, 13-20 and 25-30 are rejected under 35 U.S.C. 103(a) as being obvious over Barney et al. 6,652,950 in view of DiChiara, Jr. et al. 6,479,104 and Davis et al. 2002/0189496.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter

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disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Barney et al. disclose a method of making a thermal insulating blanket comprising: providing a batting of alumina fiber material; covering the batting with an outer insulating layer of woven ceramic fiber material such as the trade name product NEXTEL 440 and an inner insulating layer of woven ceramic material such as E-glass; stitching the batting and layers together; impregnating the outer insulating layer with a ceramic coating such as lanthanum phosphate (col. 2-4). Barney et al. do not disclose compressing the blanket after impregnating or sintering after curing (drying) the ceramic coating.

DiChiara, Jr. et al. teach that to control the surface mechanical and thermal properties of ceramic coatings applied to a substrate, a mechanical overpressure is applied to the coating with a pressing tool, such as a flat and smooth tool to form a flat and highly reflective coating (col. 5, line 18 – col. 6, line 25).

Davis et al. teach that monazite-based coatings such as lanthanum phosphate are provided on ceramic fabrics by applying as a slurry on the fabric, drying the slurry then sintering at 1800-

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2400°F to improve the durability of the coating. Davis et al. teach that the coating can also comprise SiC additives and that the aqueous slurry comprise 15-25 vol% solids [0012]-[0016].

It would have been obvious to one of ordinary skill in the art to have modified the method of Barney et al. for making a thermal insulating blanket by compressing the blanket with a smooth surface tool after impregnating with the lanthanum phosphate (monazite) coating, as taught by DiChiara, Jr. et al., to control the surface mechanical and thermal properties of the coating, thus providing the coating with a flat and highly reflective coating.

It would have been obvious to one of ordinary skill in the art to have further modified the method of Barney et al. by sintering the coating at 1800-2400°F after impregnating and compressing, as taught by Davis et al., to improve the durability of the monazite coating. Providing the coating as an aqueous of 15-25 vol%, as encompassed by Claim 20, would have been obvious to one of ordinary skill in the art, as taught by Davis et al.

Providing the outer insulating layer of thickness as claimed in Claim 15, impregnating the layer by soaking or as claimed in Claim 19 and turning the edges of the outer layer as claimed in Claim 27 would have been obvious to one of ordinary skill in the art for making a thermal insulating blanket.

(5)

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 11 above, and further in view of Fischer et al. 6,497,390.

Fisher et al. teach that in making thermal protection, one or several plies can be used to form the ceramic cover layer to be stitched to the underlying insulation mat (col. 3, line 47-51).

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It would have been obvious to one of ordinary skill in the art to have modified the method of the references as combined by covering the batting with multiple plies for the outer insulating layer, as Fisher et al. teach that one or several plies can be used to form the ceramic cover layer to be stitched to an insulation mat for forming thermal protection.

Allowable Subject Matter

(6)

Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

(7)

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

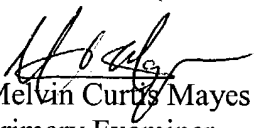
(8)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 571-272-1234. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Melvin Curtis Mayes
Primary Examiner
Art Unit 1734

MCM
March 2, 2004